REMARKS

Claims 1-20 are pending in the Application. Claims 1, 2, 3, 8-13, 18, and 20 are under consideration, while non-elected claims 4-7, 14-17 and 19 have been withdrawn. Claims 1, 8 and 18 are amended herein. New claim 20 is added herein. Support for claim 20 may be found in claim 1, and thus claim 20 is believed to read on the elected embodiment. Support for the amendments to the claims may be found in the claims as originally filed. Reconsideration is requested based on the foregoing amendment and the following remarks.

REJECTION UNDER 35 U.S.C. § 102:

Claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by Sorin et al., US 6,766,115 (hereinafter "Sorin"). The rejection is traversed to the extent it might apply to the claims as amended.

According to at least one embodiment of the invention, a transmitter for each wavelength that is formed by the optical signal already stores an identifier. Accordingly, an error of the identifier can be detected to point out an incorrect connection of a cable connecting a transmitter and a receiver. A missing optical signal can be distinguished from an abnormal identifier of a wavelength component. Thus, maintenance problems may be avoided.

Claim 1, in particular, recites,

"a judgment unit for forming a judgment whether or not each of the optical signal is down or each of said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component."

Sorin, on the other hand, neither teaches, discloses, nor suggests "a judgment unit for forming a judgment whether or not each of the optical signal is down or each of said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component," as recited in claim 1. As Sorin, rather, describes at column 5, line 66 through column 6, line 12,

> The processor 214 receives the electrical signals from the heterodyne receiver and processes the electrical signals to determine port-specific optical characteristics of the multiport device under test 220. In an embodiment, the processor also utilizes the frequency information from the frequency counter 206 to characterize the multiport device under test. The processor may include analog signal processing circuitry and/or digital signal processing circuitry and support software as is known in the field of electrical signal processing. As described

> below, the processor may include frequency domain filters to differentiate port-specific heterodyne signals. In an embodiment, an analog signal from the photodetector is converted into digital signals and the digital signals are subsequently processed.

Thus, Sorin uses the electrical signals from the heterodyne receiver to determine port-specific optical characteristics of the multiport device under test 220, and frequency information from the frequency counter 206 to characterize the multiport device under test. This is to be contrasted with claim 1, which recites, "a judgment unit for forming a judgment whether or not each of the optical signal is down or each of said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component."

Claim 1 recites further,

"wherein each of said identifier is stored in a predetermined position of each flame and is proper."

Sorin neither teaches, discloses, nor suggests "a judgment unit for forming a judgment whether or not each of the optical signal is down or each of said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component," as discussed above. Since Sorin neither teaches, discloses, nor suggests "a judgment unit for forming a judgment whether or not each of the optical signal is down or each of said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component," Sorin cannot teach, disclose, or suggest "wherein each of said identifier is stored in a predetermined position of each flame and is proper," as recited in claim 1, either. Claim 1 is thus submitted to be allowable. Withdrawal of the rejection of claim 1 is earnestly solicited.

REJECTIONS UNDER 35 U.S.C. § 103:

Claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sorin. The rejection is traversed, to the extent it might apply to the claims as amended.

Claims 2 and 3 depend from claim 1 and add further distinguishing elements. Sorin neither teaches, discloses, nor suggests "a judgment unit for forming a judgment whether or not each of the optical signal is down or each of said identifier is abnormal for each of said

wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component," or "wherein each of said identifier is stored in a predetermined position of each flame and is proper," as discussed above with respect to the rejection of claim 1. Thus, even if Sorin were modified as proposed in the Office Action, the claimed invention would not result. Claims 2 and 3 are thus also submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 1. Withdrawal of the rejection of claims 2 and 3 is also earnestly solicited.

Claims 8-13:

Claims 8-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Swanson et al., US 6,580,531 (hereinafter "Swanson"). The rejection is traversed to the extent it might apply to the claims as amended.

Claim 8 recites,

"wherein said judgment unit judges the optical signal being down and outputs an alarm indicating that an input of the optical signal is down when said detection result of said light-power-detecting unit indicates the optical signal is abnormal."

Swanson, on the other hand, neither teaches, discloses, nor suggests "wherein said judgment unit judges the optical signal being down and outputs an alarm indicating that an input of the optical signal is down when said detection result of said light-power-detecting unit indicates the optical signal is abnormal," as recited in claim 8. As Swanson, rather, describes at column 8, lines 25-33,

> Otherwise, at step 114, the optical output power of the laser measured at step 106 is compared with a desired laser peak output power. If the measured optical output power of the laser is substantially equal to the desired laser peak output power, then step 114 is followed by step 118. Otherwise, step 114 is followed by step 116, in which the laser power bias current is increased (or decreased) by a predetermined increment by controlling a digital to analog converter associated with the laser current control circuit 69.

Thus, Swanson increases (or decreases) laser power bias current by a predetermined increment if a measured optical output power of the laser is not equal to a desired laser peak output power. This is to be contrasted with claim 8, which recites, "wherein said judgment unit judges the optical signal being down and outputs an alarm indicating that an input of the optical signal is down when said detection result of said light-power-detecting unit indicates the optical signal is abnormal."

Claim 8 recites further,

"judges the optical signal being degraded and outputs an alarm indicating that the optical signal is degraded when said detection result of said light-power-detecting unit indicates the optical signal is normal and said detection result of said OSNR-detecting unit regarding the optical signal corresponding to said wavelength component designates an abnormal signal-to-noise ratio."

Swanson neither teaches, discloses, nor suggests "wherein said judgment unit judges the optical signal being down and outputs an alarm indicating that an input of the optical signal is down when said detection result of said light-power-detecting unit indicates the optical signal is abnormal," as discussed above. Since Swanson neither teaches, discloses, nor suggests "wherein said judgment unit judges the optical signal being down and outputs an alarm indicating that an input of the optical signal is down when said detection result of said light-power-detecting unit indicates the optical signal is abnormal," Swanson cannot teach, disclose, or suggest "judges the optical signal being degraded and outputs an alarm indicating that the optical signal is degraded when said detection result of said light-power-detecting unit indicates the optical signal is normal and said detection result of said OSNR-detecting unit regarding the optical signal corresponding to said wavelength component designates an abnormal signal-to-noise ratio," as recited in claim 8, either.

As Swanson, rather, describes at column 10, lines 54-63,

> At step 156, the projected optical signal to noise ratio determined at step 152 is compared to a specified maximum optical signal to noise ratio for the predetermined bit error rate. If the projected optical signal to noise ratio is less than the specified maximum, then step 156 is followed by step 158, in which an indication is provided that the board under test has passed the bit error rate test. Otherwise, step 156 is followed by step 160, in which an indication is generated that the board under test has failed the bit error rate test.

Thus, Swanson compares a projected optical signal to noise ratio to a specified maximum optical signal to noise ratio for the predetermined bit error rate, and provides an indication as to whether a board under test has passed the bit error rate test. This is to be contrasted with claim 8, which recites, "judges the optical signal being degraded and outputs an alarm indicating that the optical signal is degraded when said detection result of said light-power-detecting unit indicates the optical signal is normal and said detection result of said OSNR-detecting unit regarding the optical signal corresponding to said wavelength component designates an abnormal signal-to-noise ratio." Thus, even if Sorin were modified as proposed in the Office Action, the claimed invention would not result. Claim 8 is thus submitted to be

allowable. Withdrawal of the rejection of claim 8 is earnestly solicited.

Claims 9-13 depend from claim 8 and add further distinguishing elements. Claims 9-13 are thus also submitted to be allowable. Withdrawal of the rejection of claims 9-13 is also earnestly solicited.

Claim 18:

Claims 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sorin in view of Swanson. The rejection is traversed, to the extent it might apply to the claims as amended.

Claim 18 recites,

"a judgment unit provided in said second line terminal equipment and used for forming a judgment whether or not an optical signal is down or said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component."

Sorin neither teaches, discloses, nor suggests "a judgment unit for forming a judgment whether or not each of the optical signal is down or each of said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component," as discussed above with respect to the rejection of claim 1. Swanson does not either, and thus cannot make up for the deficiencies of Sorin with respect to claim 18.

Claim 18 recites further,

"wherein each of said identifier is stored in a predetermined position of each flame and is proper."

Sorin neither teaches, discloses, nor suggests "wherein each of said identifier is stored in a predetermined position of each flame and is proper," as discussed above with respect to the rejection of claim 1. Swanson does not either, and thus cannot make up for the deficiencies of Sorin with respect to claim 18.

Thus, even if Sorin and Swanson were combined, as proposed in the Office Action, the claimed invention would not result. Claim 18 is thus submitted to be allowable. Withdrawal of the rejection of claim 18 is earnestly solicited.

New Claim 20:

New claim 20 recites,

"determining whether or not said identifier set in said wavelength component associated with each wavelength is normal; and

judging whether said wavelength component is missing based on the number of wavelengths or whether said identifier set is abnormal."

None of the cited references teach, disclose, or suggest "determining whether or not said identifier set in said wavelength component associated with each wavelength is normal," or "judging whether said wavelength component is missing based on the number of wavelengths or whether said identifier set is abnormal," as discussed broadly above with respect to the rejection of claim 18. Claim 20 is thus believed to be allowable as well, for at least those reasons discussed above with respect to claim 18.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all of claims 1, 2, 3, 8-13, 18, and 20 are allowable over the cited references. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: _____
Thomas E. McKiernan
Registration No. 37,889

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501